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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/312,811 05/17/99 GIARDELLO

M PM-0261607

EXAMINER

IM52/0309

PILLSBURY MADISON & SUTRO  
INTELLECTUAL PROPERTY GROUP  
1100 NEW YORK AVENUE N W  
NINTH FLOOR EAST TOWER  
WASHINGTON DC 20005-3918

TESKIN, F

ART UNIT

PAPER NUMBER

1713

DATE MAILED:

03/09/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**09/312,811**

Applicant(s)

**Giardello, et al.**

Examiner

**Fred Teskin**

Group Art Unit  
**1713**



☒ Responsive to communication(s) filed on Oct 30, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three (3) month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-24 is/are pending in the application.

Of the above, claim(s) 9-17, 21, and 24 is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-6 and 18-20 is/are rejected.

☒ Claim(s) 7, 8, 22, and 23 is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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1. Applicants' election "with traverse" of the species of polyolefin/modulator composition of polydicyclopentadiene and poly(dimethylsiloxane) modifier as disclosed on page 23 of the specification and the article of clubs as disclosed on page 9 of the specification, in paper no. 5, is acknowledged. Because applicants did not distinctly and specifically point out the supposed errors in the restriction requirement, the election is treated as an election without traverse (MPEP 818.03(a)).

2. Claims 9-17, 21 and 24 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to non-elected species. Election was made **without** traverse in paper no. 5.

3. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1-6 and 18-20 are rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. 4,701,510 to Minchak et al, alone or in view of U.S. 5,342,909 to Grubbs et al.

Applicants' claims are drawn to a composition and article comprising a polyolefin prepared by the metathesis of an olefin monomer using a Ru or Os carbene catalyst; and one or more toughness and/or hardness modulators. As noted *supra*, polydicyclopentadiene and poly(dimethylsiloxane) are the elected species of polyolefin and modifier, respectively.

Minchak exemplifies articles prepared from substantially the same composition, i.e., molded plaques prepared from a composition comprising a polymer of methyltetracyclododecene (MTD) and polydimethylsiloxane; see Examples 1-5 (columns 9-12) and note that polydimethylsiloxane and the MTD cycloolefin are used in the polymerization in amounts (48.5 g and 0.5 g, respectively) equating to 0.01 % by weight of the olefin monomer, per claim 6. In view of the identity of type and amount of modifier species, the undisclosed property of "toughness and/or hardness" modulator is reasonably presumed to inhere to the polydimethylsiloxane of Minchak's composition, absent objective evidence to the contrary.

As to the elected species of polyolefin, note Minchak's listing of MTD and dicyclopentadiene as preferred species of

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norbornene-type monomers polymerizable by metathesis catalysts (col. 5, ll. 64-66 and col. 6, line 41+). Given their indicated equivalence, one of ordinary skill would have been well motivated to use dicyclopentadiene in lieu of MTD in the Examples of Minchak and reasonably expect to obtain articles comprising polydicyclopentadiene and poly(dimethylsiloxane), as claimed.

While the particular type of metathesis catalyst recited in claims 1 and 18 is not mentioned in Minchak, there is no evidence of record demonstrating that polyolefin prepared using a Ru or Os carbene catalyst differs substantially from polycycloolefin prepared using Minchak's metathesis catalyst. To the extent applicants rely on the recited catalyst to define properties of the claimed composition, the instant claims are indeed product-by-process claims, the patentability of which depends on the novelty and unobviousness of the composition itself, In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

Alternatively, the use of a Ru or Os carbene catalyst as the metathesis catalyst of Minchak would have been obvious since (1) Minchak broadly contemplates the use of any metathesis catalyst system to conduct polymerization of cycloolefin monomers (col. 6, ll. 30-40) and (2) Grubbs teaches (col. 4, ll. 22-25; col. 9, ll. 31-55) the utility of carbene compounds of Ru and Os in catalyzing metathesis polymerization of strained cyclic olefins such as

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dicyclopentadiene, as well as specific benefits associated with such polymerization process (e.g., high catalyst activity and ease of recovery; see Grubbs at col. 10, 11. 21-38).

5. Claims 7, 8, 22 and 23 are objected to as being dependent on a rejected base claim but would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claim.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner F. M. Teskin whose telephone number is (703) 308-2456.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (703) 308-2450. The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

  
FRED TESKIN  
PATENT EXAMINER  
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FMTeskin/02-26-01